

What is claimed is:

1. An information terminal comprising:

a main terminal device comprising a voice synthesizer for voice-synthesizing voice-synthesis-subject data based on phonemic database having
5 organized phoneme data; and

a memory device for storing said voice-synthesis-subject data and said phonemic database, said memory device being detachable from said main terminal device.

10 2. The information terminal as recited in claim 1, wherein said phonemic database includes sampled data of natural voice from a human.

3. The information terminal as recited in claim 1,

wherein said main terminal device further comprises:

15 a voice output processor for delivering an output of said voice synthesizer to a speaker after removing an undesired noise from said output;

an operation unit for a user to input a command; and

20 a communication processor for accessing a server device over a network,

wherein said phonemic database includes sampled data of natural voice taken from human,

wherein, if the user selects a kind of said phonemic database and said voice-synthesis-subject data through said operation unit, said
25 communication processor transfers information on the selected kind of said phonemic database and said selected voice-synthesis-subject data to said server device, and

wherein said voice synthesizer synthesizes phonetic sound with said phonemic database and said voice-synthesis-subject data transferred from said server device via the network.

5 4. An information terminal comprising:

a voice synthesizer for synthesizing phonetic sound using voice-synthesis-subject data and phonemic data constructed of phoneme according to a voice-synthesizing program;

10 a storage unit for storing said voice-synthesizing program and said voice-synthesis-subject data;

a memory device interface for exchanging data between a memory device; and

a communication processor for accessing a network,

wherein said memory device comprises:

15 said phonemic database; and

a terminal device interface for exchanging data between said main terminal device of said information terminal.

20 5. The information terminal as recited in claim 4, wherein said communication processor is capable of downloading at least one of said voice-synthesizing program, said phonemic data, and said voice-synthesis-subject data from a server device on the network.

25 6. An information terminal comprising:

a voice synthesizer for synthesizing phonetic sound using voice-synthesis-subject data and phonemic data constructed of phoneme according to a voice-synthesizing program;

a storage unit for storing said voice-synthesizing program;
a memory device interface for exchanging data between a memory
device; and

a communication processor for accessing a network,

5 wherein said memory device comprises:

said phonemic database;

a voice-synthesis-subject-data memory for storing said
voice-synthesis-subject data; and

a terminal device interface for exchanging data between

10 said information terminal.

7. An information terminal comprising:

a voice synthesizer for synthesizing phonetic sound using voice-
synthesis-subject data and phonemic data constructed of phoneme data,

15 according to a voice-synthesizing program;

a storage unit for storing said voice-synthesizing program and said
phonemic data;

a memory device interface for exchanging data between a memory
device; and

20 a communication processor for accessing a network,

wherein said memory device comprises:

a voice-synthesis-subject data memory for storing said
voice-synthesis-subject data; and

a terminal device interface for exchanging data with said
25 memory device interface.

8. An information terminal comprising:

a voice synthesizer for synthesizing phonetic sound using voice-synthesis-subject data and phonemic data constructed of phoneme data according to a voice-synthesizing program;

a storage unit for storing said voice-synthesizing program; and

5 a memory device interface for exchanging data between a memory device,

wherein said memory device comprises:

a phonemic database for storing said phonemic data;

a voice-synthesis-subject data memory for storing said

10 voice-synthesis-subject data;

a terminal device interface for exchanging data between said memory device interface; and

a communication processor for accessing a network.

15 9. The information terminal as recited in claim 8, further comprising a memory controller for downloading said voice-synthesizing program, said phonemic data, and said voice-synthesis-subject data from a server device on said network through said communication processor, and for transferring said downloaded voice-synthesis-subject data, phonemic data, and voice-synthesizing program to said storage unit via said terminal device interface
20 and said memory device interface.

10. An information terminal comprising:

a storage unit for storing a voice-synthesizing program;

25 a memory device interface for exchanging data between a memory device; and

a communication processor for accessing a network,

wherein said memory device comprises:

a voice synthesizer for synthesizing phonetic sound using voice-synthesis-subject data and phonemic data constructed of phoneme data according to said voice-synthesizing program, said voice-synthesizer storing
5 said voice-synthesizing program; and

a terminal device interface for exchanging data between said memory device interface.

11. The information terminal as recited in claim 10, wherein said
10 memory device further comprises at least one of a voice-synthesis-subject database for storing said voice-synthesis-subject data, and a phonemic database for storing said phoneme data.

12. The information terminal as recited in claim 1,
15 wherein one of said main terminal device and said memory device further comprises a voice-recording processor for a user to register a character voice, and

wherein said voice synthesizer voice-synthesizes said voice-synthesis-subject data with said registered character voice.

20 13. The information terminal as recited in claim 1,
wherein one of said main terminal device and said memory device further comprises a translation processor for translating said voice-synthesis-subject data into language desired by a user, and

25 wherein said speech synthesizer voice-synthesis said translated voice-synthesis-subject data.

14. The information terminal as recited in claim 13,

wherein one of said main terminal device and said memory device further comprises a voice registering processor for the user to register character voice, and

5 wherein said voice synthesizer voice-synthesis said translated voice-synthesis-subject data with said registered character voice.

15. The information terminal as recited in claim 1,

10 wherein said main terminal device further comprises a communication processor for accessing a network, and for downloading only a part of said voice-synthesis-subject data desired by a user into one of said main terminal device and said memory device from a server device on said network, and said server device includes a download selector and storing said voice-synthesis-subject data.

15 16. The information terminal as recited in claim 1, wherein said voice-synthesis-subject data comprises text data.

17. The information terminal as recited in claim 1,

20 wherein said voice-synthesis-subject data comprises music data having musical score data and text data, and

wherein said voice synthesizer synthesizes phonetic sound of said music data with predetermined character voice desired by a user when a user specifies said phonemic database and said music data.

25 18. The information terminal as recited in claim 1, wherein said voice synthesizer voice-synthesizes a certain character string in said voice-synthesis-

subject data and outputs phonetic sound in other voice than voice of a character specified by a user.

19. The information terminal as recited in claim 1, wherein said voice-
5 synthesizer voice-synthesize said voice-synthesis-subject data while inserting,
in said voice-synthesis-subject data, a sound implying that phonetic sound
being output is synthesized sound.

20. The information terminal as recited in claim 1,
10 wherein one of said main terminal device and said memory device
further comprises a phonemic database selector for selecting said phonemic
database, and
wherein said voice synthesizer voice-synthesize a portion of said
voice-synthesis-subject data with character voice desired for the portion by a
15 user.

21. The information terminal as recited in claim 20,
wherein one of said main terminal device and said memory device
further comprises:
20 a voice registering processor for the user to register
character voice;
a phonemic database selector for selecting said voice-
synthesis-subject data and said phonemic database applied to said voice-
synthesis-subject data; and
25 a storage unit for storing said voice-synthesis-subject
data and an identification code for said selected phonemic database, and
wherein said voice synthesizer distinguishes phonemic database of

voice character to be applied according to said identification code.

22. The information terminal as recited in claim 20,

wherein said voice-synthesis-subject data comprises music data
5 having musical score and lyrics, and

wherein said voice synthesizer synthesizes phonetic sound of said music data with voice of a predetermined character desired by the user when the user specifies said phonemic database and said music data.

10 23. The information terminal as recited in claim 1, wherein one of said main terminal device and said memory device further comprises a visual display processor for providing a visual display associated with said voice-synthesis-subject data.

15 25. The information terminal as recited in claim 1,
wherein said memory device inputs said voice-synthesis-subject data to said main terminal device, and

wherein said main terminal device further comprises at least one of a speaker and an earphone for producing phonetic sound synthesized by said
20 voice synthesizer.

26. The information terminal as recited in claim 1, wherein said memory device comprises one of a memory card, an optical disk, and a magnetic disk.

25 27. A server device comprising:

a controller having a communication function with a network;

a voice synthesizer for extracting and linking phonemic data which is the most suitable to each of character data in voice-synthesis-subject data, and for delivering said phonemic data to a voice output processor in a terminal device;

5 a text data memory for storing said voice-synthesis-subject data; and

a phonemic database memory for storing a phonemic database constructed of sampled data of natural voice taken from real human,

10 wherein, when receiving information indicating a kind of phonemic database and said voice-synthesis-subject data from said terminal device, said voice synthesizer voice-synthesizes said voice-synthesis-subject data specified by the information with said phonemic database of the kind specified by the information, and

15 said controller transfers the voice-synthesized voice-synthesis-subject data to said terminal device over the network.

28. The server device as recited in claim 27, further comprising:

a musical-score-data memory for storing musical-score data; and

20 a music synthesizer for reading the musical-score data from said musical-score-data memory, for reading said voice-synthesis-subject data, for linking said musical-score data with synthesized sound as a pair, and for converting said linked musical-score data into a format reproducible by said terminal device.

25 29. The server device as recited in claim 27, further comprising a phonemic database selector for selecting said phonemic database,

wherein said voice synthesizer voice-synthesis a portion of said

voice-synthesis-subject data with voice of character desired for the portion by a user,

wherein said controller transfers said voice-synthesized voice-synthesis-subject data to said terminal device over the network, and

5 wherein said terminal device receives said voice-synthesized voice-synthesis-subject data and reproduces it into audible sound.

30. The server device as recited in claim 27, further comprising a data registering processor for correlating said voice-synthesis-subject data with user identification information provided by the user,

10 wherein said voice synthesizer voice-synthesizes said provided voice-synthesis-subject data,

wherein said controller transfers said voice-synthesized voice-synthesis-subject data to said terminal device over the network; and

15 said terminal device receives said voice-synthesized voice-synthesis-subject data and reproduces it into audible sound.

31. A reading system comprising:

20 a server device on a network, comprising a voice synthesizer, voice-synthesis-subject data, and phonemic database; and

a terminal device comprising a voice output unit,

wherein, if a user selects said voice-synthesis-subject data through said terminal device, said voice synthesizer voice-synthesizes said selected voice-synthesis-subject data with specified phonemic database,

25 wherein said server device delivers said synthesized voice-synthesis-subject data to said terminal device over the network, and

wherein said terminal device reproduces said synthesized voice-

synthesis-subject data into audible sound.

32. The reading system as recited in claim 31,

wherein said server device further comprises a voice registering
5 processor for the user to register character voice, and

wherein said voice synthesizer voice-synthesizes said voice-
synthesis-subject data with said registered character voice.

33. The reading system as recited in claim 31,

10 wherein said server device further comprises a translation processor
for translating said voice-synthesis-subject data into language desired by the
user, and

wherein the user selects a phonemic database and a kind of
language through said terminal device, and

15 wherein said voice synthesizer voice-synthesizes said translated
voice-synthesis-subject data with said selected phonemic database.

34. The reading system as recited in claim 33,

20 wherein said server device further comprises a voice registering
processor for the user to register a character voice desired be the user, and

wherein said voice synthesizer voice-synthesizes said translated
voice-synthesis-subject data with said character voice.

35. The reading system as recited in claim 31,

25 wherein said voice-synthesis-subject data comprises music data
having text data and musical score data, and

wherein said voice synthesizer voice-synthesizes said music data

with said phonemic database.

36. The reading system as recited in claim 31, wherein said voice synthesizer voice-synthesizes a certain character string in said voice-synthesis-subject data with other phonetic voice than character voice specified by the user.

37. The reading system as recited in claim 31, wherein said voice synthesizer voice-synthesizes said voice-synthesis-subject data and a sound implying that phonetic sound being output is synthesized sound, said voice synthesizer inserting said sound in said voice-synthesis-subject data.

38. The reading system as recited in claim 31, wherein said server device further comprises a download selector enabling a user to download a part of said voice-synthesis-subject data desired by the user into said terminal device.

39. An information terminal comprising:
a voice output processor for converting digital sound data into analog sound data, and for outputting said data to a speaker after removing an undesired noise from said data;
an operation unit for a user to input a command; and
a system controller for transferring, to a server device, a phonemic database and text data selected by the user through said operation unit, said phonemic database constructed of sampled data of natural voice taken from human,

wherein said server device voice-synthesizes said selected text data

with said phonemic database specified by the user, and

wherein said voice output processor outputs said synthesized text data transferred from said server device over a network.